



Case Study

Custom HMI Control Panels. *For Cycle-Operated and CNC Lathes.*

When DMT-Kern decided to switch controls, they also looked for a new switch and control panel provider. *EAO provided the know-how and tactile HMI System integration experience.*

EAO helped reduce manufacturing time. *The control panel was delivered ready for integration with the system.*

“It’s important to work with an HMI expert who can address all the human factors, technical and commercial considerations of a complex HMI development project”

Company Profile

Customer
DMT-Kern

Market
Machine tools

Application
Control panels for high speed lathes and CNC machining centres

EAO Series
Series 84
Series 71



Control panels feature operator-friendly, interactive programming.



Series 84 products provide a low-profile, stylish appearance, while maintaining a high level of control to increase operator productivity and avoid costly downtime.

Business Challenge

DMT Drehmaschinen (DMT-Kern) designs and manufactures custom-built cycle-operated and CNC lathes. Their equipment provides high speed, high torque capabilities that are well-suited for custom jobs and small batches, especially jobs requiring complex contours.

Their equipment is used by companies in automotive, aerospace, machining, chemical processing, consumer goods, energy supply, medical, and mechanical engineering research and development.

The CNC machines allow for quick operation with easy-to-use programming at the machine control panel, tool turrets, driven tools, and powered clamping devices to increase productivity. Their high speed spindles have a range from 1 to 5000rpm.

The lathes deliver smooth operation at high speeds with high precision. A mobile control unit allows the operator to see the job from different angles. Lathes are offered in different sizes from 2m to 7m in length. The control panels for all lathe models are identical. Both CNC machining centres and lathes feature operator-friendly, interactive programming at the ergonomically designed control panel.

When DMT-Kern decided to switch controls, they also looked for a new switch and control panel provider with the expertise to help them design and install panels to meet their customers’ expectations for robust and easy-to-use systems.

Solution

EAO worked with DMT-Kern to design control panels that would meet customer expectations and provide precision control for the custom lathes and CNC equipment. EAO provided a complete front panel package for the HMI controls, including the unique Series 71 line of PCB mountable switches, the compact Series 84 emergency stop switch, and a central print-board with a D-type connector. The Series 71 illuminated switches provide clear indication of system status with good tactile response. The switches are flush mounted for tamper-proof operation and easy cleaning. They are sealed to IP 65 to protect against dust and water for reliable operation in a machining environment.

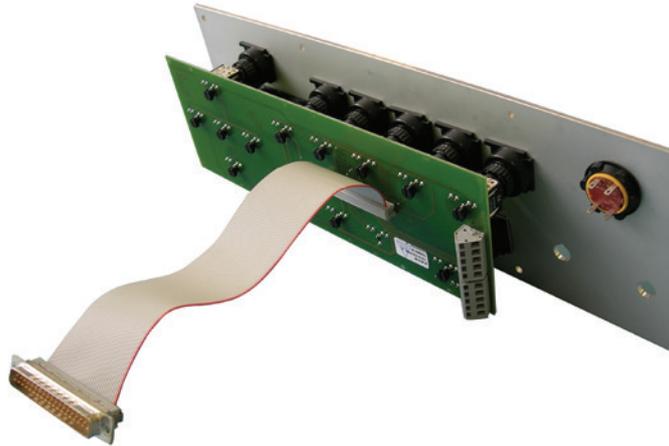
This series of switches, indicators, keylocks, and selectors are of modular design. The actuators mount to the front of the panel, while the switching element is soldered to the PCB. The two halves are then mated together without special tools by an integral patented locking pin. This unique mounting configuration

With LED illumination, the E-Stop is visible both from the front and side. *Series 84 E-Stops meet ISO 13850, and comply with EN IEC 60947-5-1 and EN IEC 60947-5-5 requirements.*

Contact

EAO AG
Tannwaldstrasse 88
CH-4601 Olten, Switzerland
Tel. +41 62 286 91 11
Fax +41 62 296 21 62
info@eao.com

More information
www.eao.com/downloads



EAO provides a complete, custom front panel package for the HMI control system with Series 71 push button and Series 84 shallow back-of-panel E-Stops.

allows for limited wiring and ease of maintenance.

The Series 84 E-Stop provides a behind-panel depth of 18 mm maximum, which makes it ideal for machine control applications. It features “mono-block” construction for easy installation and a twist-to-release actuator for deliberate re-setting of the emergency control device.

With LED illumination, the E-Stop is visible both from the front and side, and can indicate switch status. Series 84 E-Stops meet ISO 13850, and comply with EN IEC 60947-5-1 and EN IEC 60947-5-5 requirements.

Switches are connected via an existing SubD32 plug.

Results

The EAO control panels deliver the following benefits for DMT-Kern:

- Reduced manufacturing time with control panel delivered ready for integration with the system
- Reduced errors in system use
- Improved design with better switch illumination and status indication
- Custom switch and panel engraving for unique control design
- Flush mount sealed switches for reliable operation, ease of cleaning, and a long life-cycle

- Ease of HMI maintenance with front removable lenses, illumination, and the benefit of Series 71 modular PCB assembly

It's important to work with an HMI expert who can address all the human factors, technical and commercial considerations of a complex HMI development project.

EAO is a global partner and manufacturer of HMI Systems and HMI Components to a range of markets including machinery and automation, public transport, automotive design, special purpose and heavy-duty vehicles, as well as many others that involve an interaction between humans and machines. EAO is here to make this interaction innovative, intuitive and reliable.

EAO's components and systems undergo rigorous testing to assure reliability, repeatability, and long service life. EAO is ISO 9001, ISO 14001, IRIS, and ISO/TS 16949 certified for automotive and other industry requirements.